

# Delta City

## Transportation Master Plan



DRAFT REPORT  
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# Delta City

## Transportation Master Plan

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# 1. Introduction

## 1.1. Background

Delta is rather unusual among the primarily agricultural towns in the state, since it was founded in the twentieth century and owed virtually nothing regarding its establishment to direction from the general hierarchy of the [Church of Jesus Christ of Latter-day Saints](#).

The previously settled West Millard farming area was already becoming prosperous from alfalfa seed production when Frederick R. Lyman and others of his [Oak City](#) family began investigating the possibility of diverting Sevier River water upstream from the relatively new [Gunnison Bend Reservoir](#), which was used for cultivating lands at [Oasis](#), [Desert](#), [Hinckley](#), and [Abraham](#). After farmers from those communities claimed winter runoff water and commenced building a larger [Sevier Bridge Reservoir](#) in southeastern [Juab County](#), Lyman persuaded his fellow members of the Millard LDS Stake presidency, Orvil Thompson and Alonzo A. Hinckley, to call attorney James A. Melville to determine the feasibility of forming a new irrigation company in connection with this reservoir project. The Mellville Irrigation Company was organized for that purpose on 24 March 1906. Twenty-nine of the thirty-four original incorporators were residents of [Millard County](#).

That spring, fifteen stockholders met at Oasis and selected a town site of mostly uneven land in a section including the railroad section-house of Akin. The town site was named Melville, but then the United States Postal Service objected because of its similarity to a Cache Valley town, the name was changes to Burtner in honor of a helpful passenger agent of the San Pedro, Los Angeles and Salt Lake City Railroad.

The enterprise proved attractive to many other Utahns as well. The foremost early sources of settlers was [Wayne County](#), sending a dozen industrious families, including that of Hielt E. Maxfield, former bishop of Fremont, who was sustained to the same office at Burtner early in 1909. Nelson s. Bishop of [Utah County](#) constructed the first house/hotel in the town site, followed by Henry J. McCullough, most recently from [Garfield County](#), whose log house served also as the first post office and store. The first community school/church meetinghouse was a one-room building hauled from Hinckley. Not long after, construction began on a ward amusement hall.

Melville Irrigation Company stockholders entered upon land under the Desert Land Act, revised in 1891 to allow up to 320 acres providing that eighty of those were brought under irritation within a three-year period. They understood that a diversion dam, reservoir, and delivery canals were essential to accomplish this. Work was commenced in 1907 at a dam site town hundred yards upstream from where the recently rebuilt San Pedro, Los Angeles and Salt Lake City Railroad crossed the Sevier River, some four miles north of Burtner. Many stockholders paid for portions of their company shares through labor on the earthen-filled dam, primarily constructed with horse team-drawn slip scrapers. Some water was delivered to project lands late in the summer of 1908, but on 14 June 1909 the dam and spillway washed out, leaving a newly planted crop with little chance to mature. Work immediately commenced on rebuilding a pile-plank reinforced dam, which was completed that August.

By that time, another group of promoters, almost exclusively non-Mormon from the Midwest, planned to promote a project on adjacent West Millard lands. First organized 19

March 1908 as the Oasis Land and Water Company, a Nevada Corporation, they entered into agreement with the Deseret and Melville companies to procure a half interest in the Sevier Bridge Reservoir and its water rights. The company aimed to develop lands under the Carey Act of 1894, which authorized a state to receive up to a million acres of arid land from the federal government on condition it was reclaimed under the law's requirements. This was ultimately one of the most successful Carey Act projects ever developed. Unfortunately, another washout of the diversion dam in June 1910 not only discouraged many farmers but also essentially ruined the Oasis company financially. Several Melville directors induced former Utah surveyor General George A. Snow to investigate local prospects. Favorably impressed, Snow brought outside capitalists including W.J. Moody of Chicago into a new enterprise named the Delta Land and Management Company, which assumed the obligations of the defunct company and brought the project fruition. The Delta Company commenced elaborate promotional activities in California and in the Midwest, and numerous land seekers flocked to the area, usually enjoying special excursion rates offered by the railroad.

The town's name was changed to Delta at the behest of the new company in 1911, and the extended land sales boom directly stimulated its growth as well. By 1912 boxcars loaded with farm equipment, furniture, and sometimes even livestock were unloading in great numbers. While most intended to locate on their new farms, the local newspaper noted that the area around the depot looked like a camping ground because of the large number of settlers' tents. Before the boom ended there were seven hotels along with several restaurants and livery stable operations established mainly to serve the potential land buyers who continued to flock to the area throughout the decade.

Delta area soils were of the proper composition for good sugar beet production. After several years of experimentation, area farmers agreed to plan sufficient beet acreage to induce the southern Utah Sugar Company to construct a large sugar factory at Delta. It went into operation in 1917 and enjoyed good output for several years. But partly because of drought, water logging of frequently irrigated land, and the decline of beet prices, and particularly the fantastic profits being earned from alfalfa seed crops at the time, the plant closed and was eventually dismantled and moved away.

From its early years, Delta has been the commercial center of one of the largest alfalfa seed and hay producing regions in the Intermountain West. The early 1920s was a time of expansion beyond the limits of productive farmland, stimulated by exceptionally abundant irrigation water and particularly high alfalfa seed crop prices. In 1925 the area produced more than one-fourth of the total seed harvested in the entire nation, bringing impressive profits to many growers. By that time, three national seed-packing companies and several local concerns had warehouses and cleaning plants in the Delta area, some of which continued through the difficult years of the 1930s to prosper again later. In the decade of the 1950s, the region produced nearly six percent of the nation's alfalfa seed output.

During the Depression years, Delta-vicinity livestock production increased dramatically, enabling many families to survive the difficult period. Such endeavors continued to expand until the early 1960s the Delta Livestock Auction was the second largest in Utah. The local economy received a boost during World War II through employment opportunities for many residents connected with the Japanese relocation camp at nearby Topaz. Although it was part of a shameful episode in the nation's history, many residents remember positive social and cultural interactions with the internees.

Mining, particularly of fluorspar, hauled by dump truck to be shipped from Delta by railroad ore car, also enhanced the local economy in the late 1940s and early 1950s, as did the mining and milling of beryllium several decades later. Completion of Highway 6/50 in the early 1950s brought new prosperity to the city's hotels, motels, restaurants, and service stations, as well as stimulating other enterprises. The area has long been popular with pheasant hunters, water-sports enthusiasts, rock hounds, all-terrain-vehicle riders, and those who appreciated a vast and varied desert landscape. Recreational facilities in the Delta area are exceptionally good.

In the late 1970s promoters of the Intermountain Power Project (IPP) announced their intentions to locate a coal-burning plant near Delta to generate electric power for southern California and other areas. Many local water shareholders sold the company essential water at good prices. Company and local government officials cooperated in enhancing much of the municipal infrastructure in preparation for the increased population expected during the construction phase. The resultant boom was exceptionally free from increased crime of conflict, and the IPP presence has been a positive aspect of recent local history. Delta residents continue to make their city an excellent place to live. They have always taken particular pride in their [schools](#), and higher than average percentage of Delta students have gone on to higher education studies and outstanding achievements. The high school wrestling team has attained the national attention for winning an unprecedented twenty-five state championships as of the early 1990s.

This information was provided from [www.onlineutah.com](http://www.onlineutah.com), in an article written by Edward Leo Lyman

## **1.2. Study Need**

The City of Delta has seen a 7.0% population increase within the last decade and just over 55.3% population increase the decade before. From 1950 to 2000, the population has increased 88.4%. The City of Delta has shown a very consistent increase in population. A well-established transportation plan is needed to provide direction for continual maintenance and improvements to Delta City's transportation system.

Delta City has an adopted a General Plan. The Delta City General Plan briefly describes the transportation needs of this area. With the aging infrastructure of the transportation system and the need for system improvements, a more extensive transportation plan is necessary for Delta City and the surrounding area.

Some of the major transportation issues around the State are as follows:

- Safety
- Railroad crossings
- Trails (bicycle, pedestrian, & OHV)
- Signals
- City interchange aesthetics
- Connectivity of roadways
- Property access
- Truck traffic
- Alternate routes
- Speed limits



Delta City recognizes the importance of building and maintaining safe roadways, not only for the auto traffic but also for pedestrians and bicyclists.

### **1.3. Study Purpose**

The purpose of this study is to assist in the development of a transportation master plan for Delta City. This plan could be adopted by Delta City as a companion document to the city's General Plan. With the transportation master plan in place the city can qualify for grants from the State Quality Growth Commission.

The primary objective of the study is to establish a solid transportation master plan to guide future developments and roadway expenditures. The plan includes two major components:

- Short-range action plan
- Long-range transportation plan

Short-range improvements focus on specific projects to improve deficiencies in the existing transportation system. The long-range plan will identify those projects that require significant advance planning and funding to implement and are needed to accommodate future traffic demand within the study area.

### **1.4. Study Area**

The study area includes Delta City, and land adjacent to it that is in Millard County. A general location map is shown in Figure 1-1. A more detailed map of the study area and city limits is shown in Figure 1-2. The study area was developed by Delta City and approved by the Delta City Transportation Master Plan Technical Advisory Committee.

The roadway network within the study area includes US-6, SR-257, and SR-125. Each of these roadways provides a vital function to Delta City proper and also access to adjacent municipalities. These roadways along with the local road network are shown in Figure 2.

### **1.5. Study Process**

The study, which began in February 2005, is proceeding as a cooperative effort between Delta City, UDOT, and local community members. It is being conducted under the guidance of Delta City Officials. The following individuals participated in the initial meetings to provide input used to create this document. This group listed below will be referred to as the Technical Advisory Committee or "TAC" for this document.

**Gayle Bunker**  
**Alan Riding**  
**Ken Clark**  
**David Corey**  
**Thayne Henrie**  
**Donald Brown**  
**Glen Swalberg**  
**Bruce Curtis**  
**Wes Bloomfield**  
**Robert Banks**  
**Margaret Dutson**

**Delta Mayor**  
**Delta Public Works Director**  
**Delta Public Works**  
**Millard County**  
**Millard County**  
**Hinkley Mayor**  
**Delta City Council**  
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**Delta Planning and Zoning  
Delta Planning and Zoning  
Delta Chamber of Commerce  
UDOT Maintenance  
UDOT Freight Planner  
UDOT Planning  
UDOT Planning  
UDOT Planning  
UDOT Planning**

The study process for the Delta City Transportation Master Plan consist of three basic parts: (1) inventory and analyze existing conditions, (2) project future conditions, and (3) development of a transportation master plan (TMP). This process involves the participation of the TAC for guidance, review, evaluation and recommendations in developing the TMP to include development of future projects for the identified study area.

The TAC will evaluate each part of the study process. Their comments will be incorporated into the study's draft final report. The remainder of the draft final report will focus on the recommendation and implementation portion of the transportation plan program. Transportation projects that will be recommended for the short-term and long-range needs will be developed based on the TAC's recommendations and concurrence.

The study process allows for the solicitation of input from the public at two TAC workshops. This public participation element is included in the study process to ensure that any decisions made regarding this study are acceptable to the community.

The first TAC workshop will provide an inventory and analysis of existing conditions and identify needed transportation improvements. The second TAC workshop will focus on prioritizing projects, estimating costs, and discussion of the funding processes.

The TAC is expected to recommend those comments that are to be incorporated into the report and applicable to the goals of this study. The draft final report and the final report will be submitted to the City for review and comments.

Upon local review of the draft report, UDOT will prepare appropriate changes and submit the final report to the City for approval. The final report will describe the study process, findings and conclusions, and will document the analysis of the recommended transportation system projects and improvements.



Figure 1-1: Delta Study Area Location

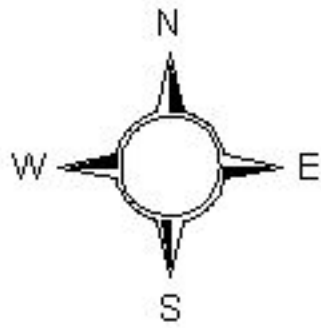
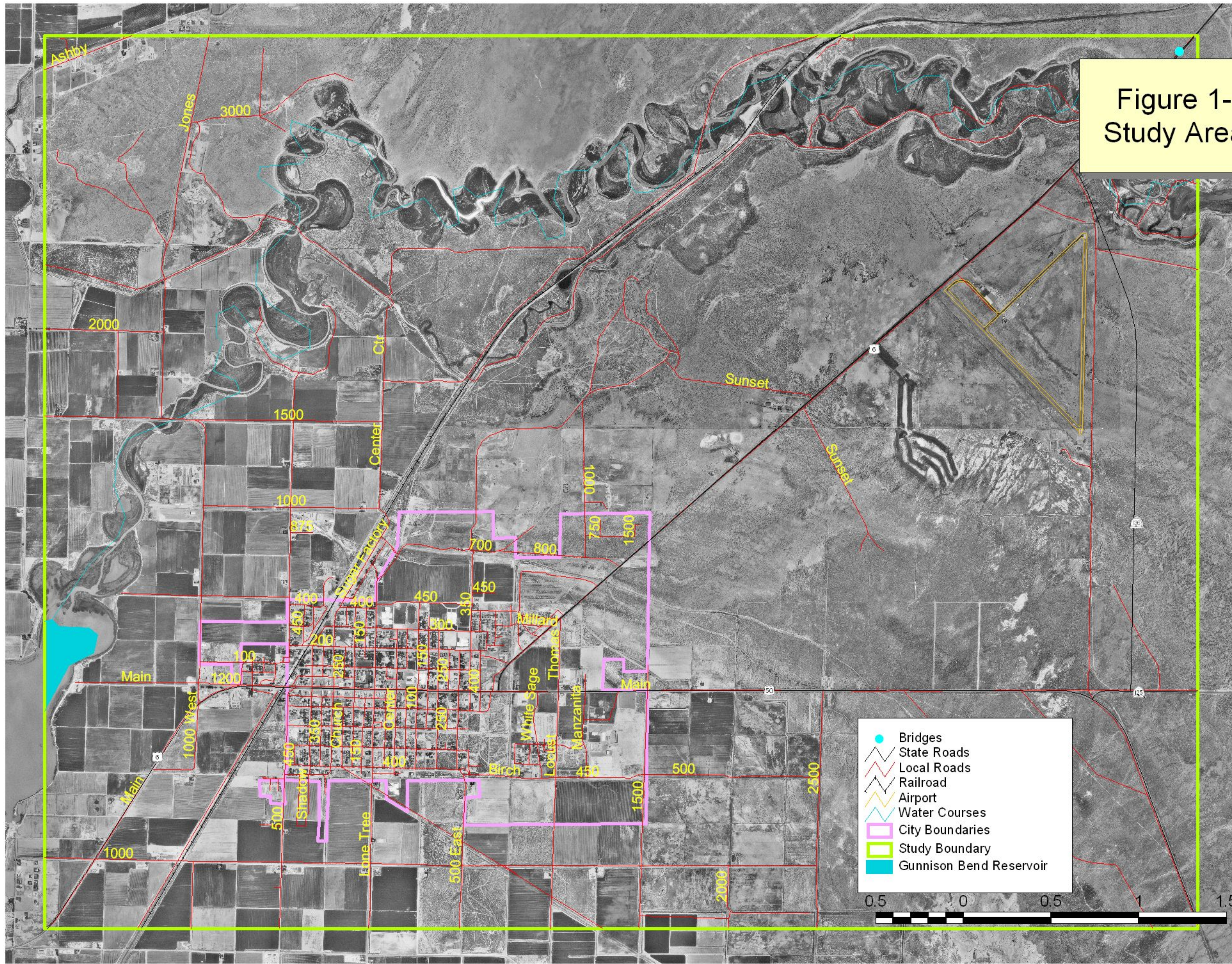




Figure 1-2: Delta  
Study Area Vicinity



- Bridges
- State Roads
- Local Roads
- Railroad
- Airport
- Water Courses
- City Boundaries
- Study Boundary
- Gunnison Bend Reservoir

0.5 0 0.5 1 1.5 Miles



## 2. Existing Conditions

An inventory and evaluation of existing conditions within the study area was conducted to identify existing transportation problems or issues. The results of the investigation follow.

### 2.1. Land Use

In order to analyze and forecast traffic volumes, it is essential to understand the land use patterns within the study area. Much of the City is zoned Residential, but there are also many issues dealing with commercial and industrial properties. By analyzing the patterns or changes in land use, we can better predict the ever-changing transportation needs.

The Delta City Zoning map follows on the next page.

### 2.2. Environmental

In Utah there are a variety of local environmental issues. Each of the cities and counties need to look at what are the environmental issues in their areas on a case-by-case basis. There are many resources that can help local entities to determine what issues need to be addressed and how any problems that may exist can be resolved.

Some of the environmental concerns around the State are wetlands, endangered species, archeological sites, and geological sites among other issues. Environmental concerns should be addressed when looking at an area for any type of improvement to the transportation system. Protecting the environment is a critical part of the transportation planning process.

### 2.3. Socio-Economic (Census Brief: Cities and Counties of Utah, May 2001)

Delta City ranks 80<sup>th</sup> for population in the State of Utah, out of 235 incorporated cities and towns. Historical growth rates have been identified for this study, because past growth is usually a good indicator of what might occur in the future. Chart 2-1 identifies the population growth over the past 50 years for the State of Utah, Millard County and Delta City. Chart 2-2 identifies that population change in Delta City has ranged from decreasing 7.5% between 1950 and 1960 to increasing 55.3% between 1980 and 1990, while growth in the State has gained between 18 and 38 percent during the past 50 years. Chart 2-3 identifies yearly population growth rates for the State of Utah and Millard County.

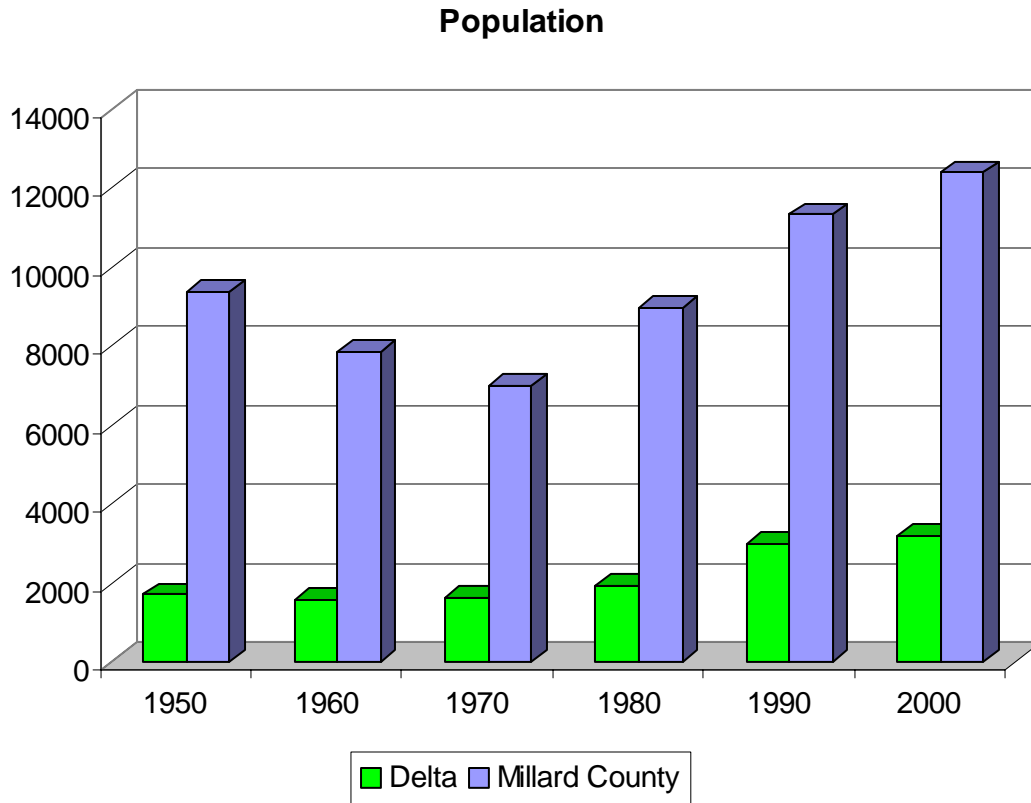
Chart 2-3 identifies yearly population growth rates for the State of Utah and Millard County.

As the State population has grown every decade from 1950 until 2000, **Millard County has also showed a slower, yet consistent, rate of growth in population over the same period.**

Delta City has some unique demographic characteristics when compared with the State, particularly with age demographics. In the 25 to 54-age category, the State is at 38.6% the County is at 34.4% and the City is at 35.6%. For the 65+-age category, the State is at 8.5%, the County is at 12.3% and the City is at 10.7%. The State's median age is 27.1 years and the County's median age is 29.9 years, City's median age is 27.7 years. Another interesting statistic is that of Veteran status with State at 10.7%, County at 11.8%, and Delta City at 12.0%.

Chart 2-1. Population Data

| Year | Population |                |            |
|------|------------|----------------|------------|
|      | Utah       | Millard County | Delta City |
| 1950 | 688,862    | 9,387          | 1,703      |
| 1960 | 890,627    | 7,866          | 1,576      |
| 1970 | 1,059,273  | 6,988          | 1,610      |
| 1980 | 1,461,037  | 8,970          | 1,930      |
| 1990 | 1,722,850  | 11,333         | 2,998      |
| 2000 | 2,233,169  | 12,404         | 3,209      |



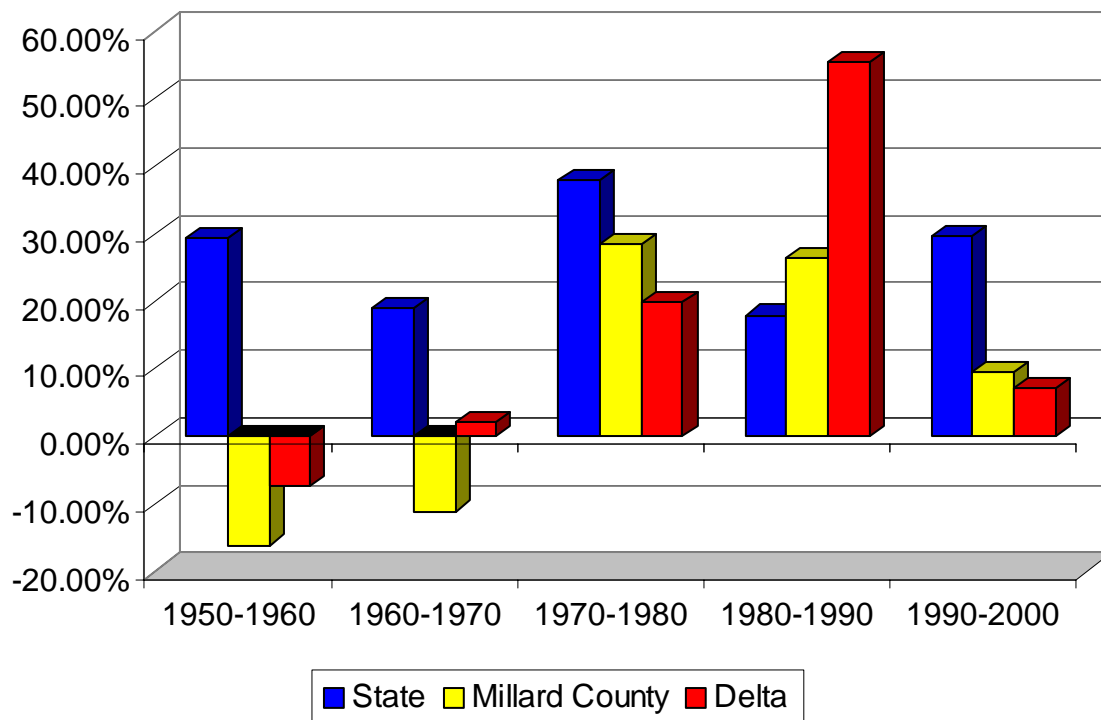
Source: U.S. Bureau of the Census

<http://www.governor.utah.gov/dea/OtherPublications.html>

**Chart 2-2. Population Change Data**

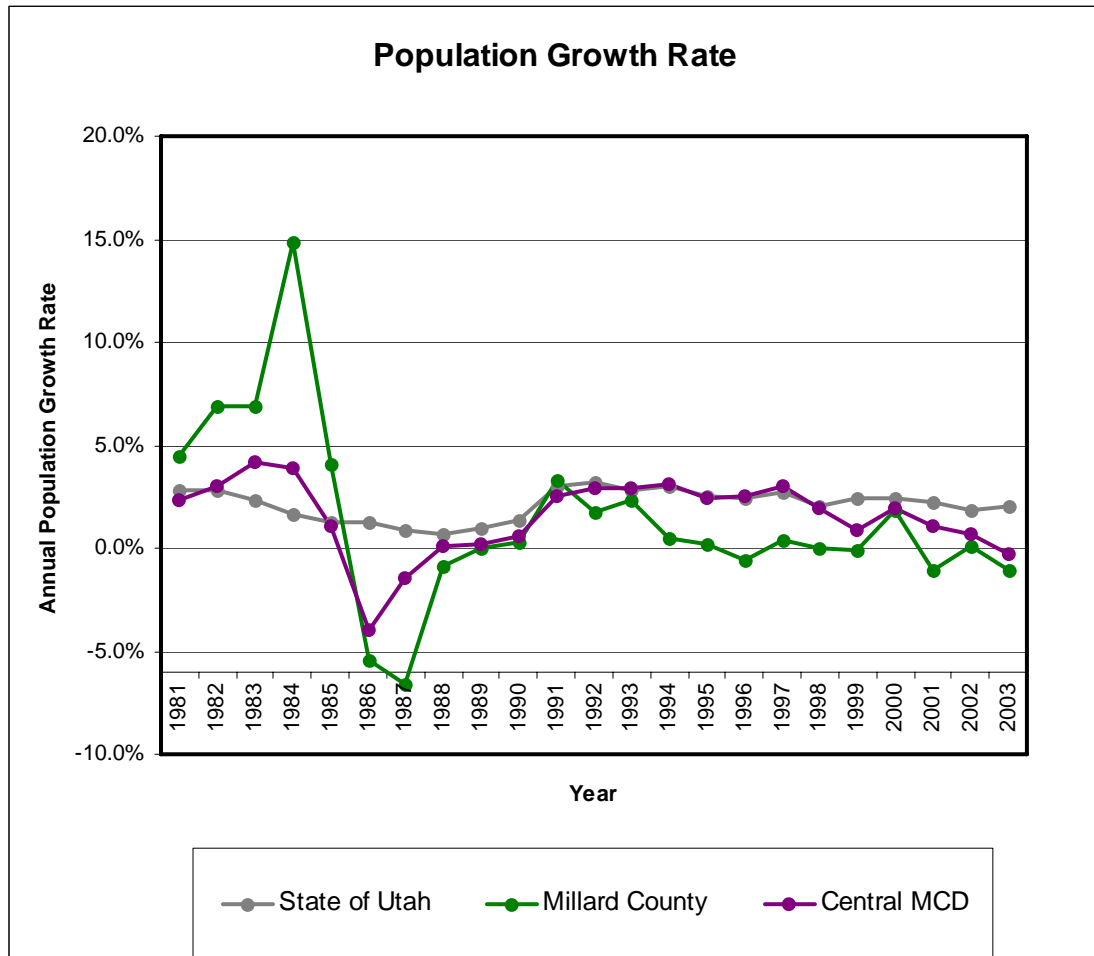
| Decade    | State of Utah | Millard County | Delta City |
|-----------|---------------|----------------|------------|
| 1950-1960 | 29.29%        | -16.20%        | -7.46%     |
| 1960-1970 | 18.94%        | -11.16%        | 2.16%      |
| 1970-1980 | 37.93%        | 28.36%         | 19.88%     |
| 1980-1990 | 17.92%        | 26.34%         | 55.34%     |
| 1990-2000 | 29.62%        | 9.45%          | 7.04%      |

**Decennial Population Change**



Source Data: U.S. Bureau of the Census  
<http://www.governor.utah./dea/OtherPublications.html>

**Chart 2-3. Population Growth Rate (1980-2000)**



MCD = Multi-County Districts, Central MCD = Juab, Millard, Piute, Sanpete, Sevier & Wayne Counties

Source: Governors Office of Planning and Budget

<http://www.governor.utah.gov/dea>

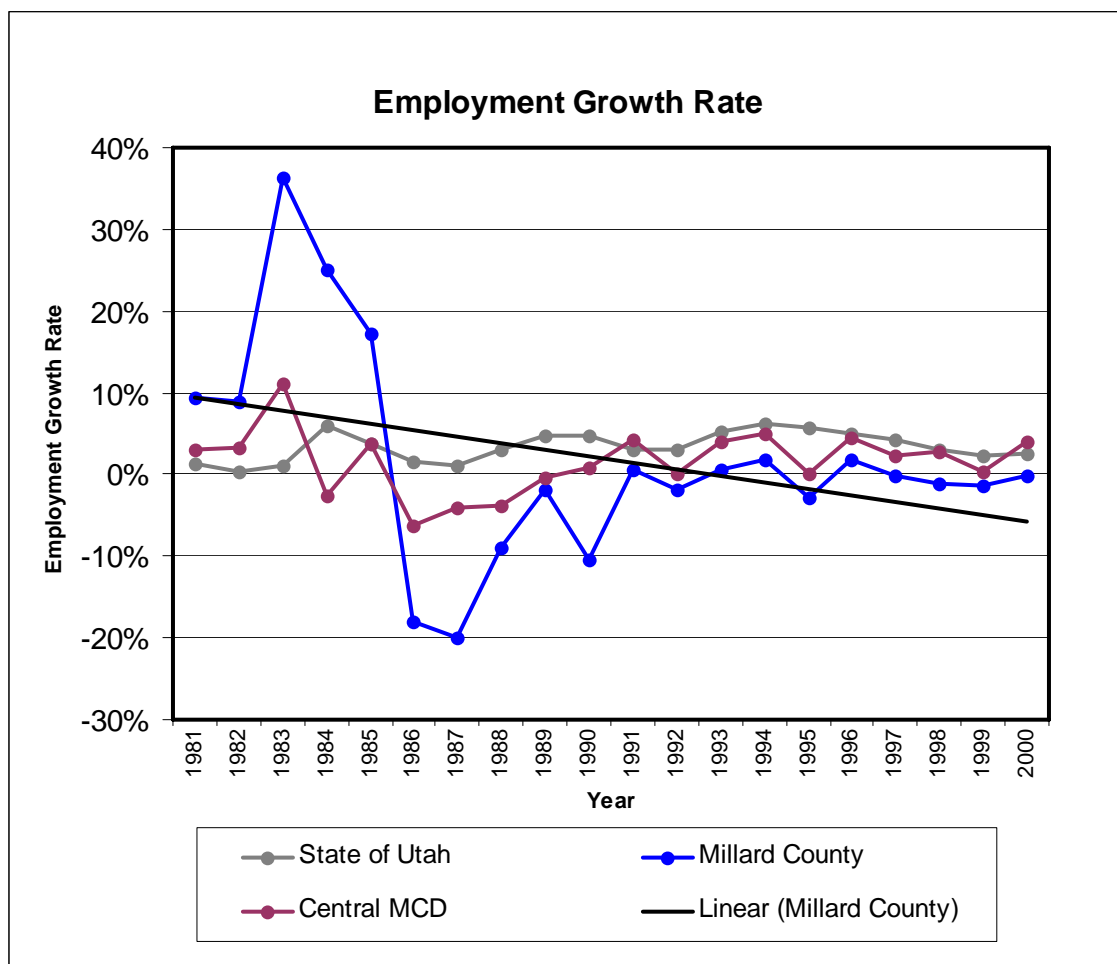


The 2000 median household income in Delta City is \$37,773, compared to the State median household income of \$45,726.

The unemployment rate in Delta City was 7.0 percent in 2000. According to the Utah Department of Workforce Services (DWS), in 2000 there were approximately 1,344 employed people in Delta City or 63.4% of the population. The city has 94 unemployed people, which is 4.4 % of the population. There are 5,179 employed people in Millard County or 57.6% percent of the population. The county has 303 people unemployed, which is 3.6 % of the population.

The majority of employees in Millard County work in three primary employment sectors: Government, Trade and Services as shown in Chart 2-5. In the county, these sectors make up 70.91% of the labor force. Another interesting note was that housing built from 1990-2000 were 10.2% of total for Delta City compared to 25% for the state. Also homes built before 1939 were 10.4% of the total for Delta City with 10% for the state.

**Chart 2-4. Employment Growth Rate (1980-2000)**



MCD = Multi-County Districts, Central MCD = Juab, Millard, Piute, Sanpete, Sevier & Wayne Counties

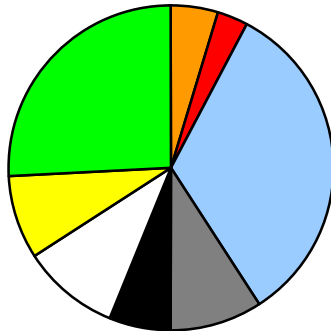
Source: Governors Office of Planning and Budget  
<http://www.governor.utah.gov/dea>

Chart 2-5. Employment Sectors (1980-2000)

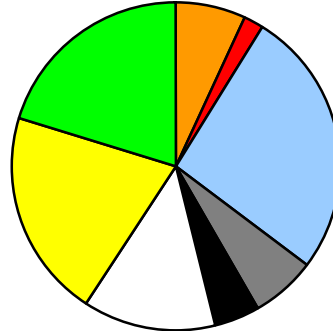
| Sector        | 1980   | 1990   | 2000   | $\Delta\%$ 1980-2000 |
|---------------|--------|--------|--------|----------------------|
| Construction  | 4.87%  | 7.01%  | 3.86%  | 37.62%               |
| FIRE          | 2.89%  | 1.96%  | 1.72%  | 3.33%                |
| Government    | 33.53% | 26.23% | 28.95% | 49.86%               |
| Manufacturing | 9.30%  | 6.41%  | 4.08%  | -23.83%              |
| Mining        | 6.02%  | 4.42%  | 3.00%  | -13.60%              |
| Services      | 9.83%  | 13.25% | 16.79% | 196.57%              |
| TCPU          | 8.33%  | 20.40% | 16.49% | 243.35%              |
| Trade         | 26.16% | 20.38% | 25.17% | 67.03%               |

FIRE = Finance, Insurance & Real Estate  
 TCPU = Telecommunications & Public Utilities

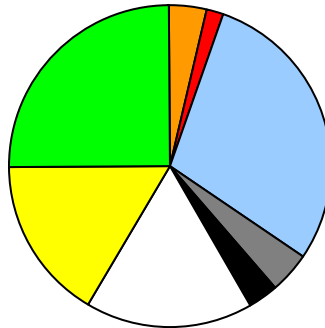
1980 Employment Sectors



1990 Employment Sectors



2000 Employment Sectors



Source: Governors Office of Planning and Budget  
<http://www.governor.utah.gov/dea/HistoricalData.html>

## 2.4. Functional Street Classification

This document identifies the current function and operational characteristics of the selected roadway network of Delta City. Functional street classification is a subjective means to identify how a roadway functions and operates when a combination of the roadway's characteristics are evaluated. These characteristics include; roadway configuration, right-of-way, traffic volume, carrying capacity, property access, speed limit, roadway spacing, and length of trips using the roadway.

The primary classifications used in classifying selected roadways of Delta City are: Interstate, Principle Arterial, Minor Arterial, Major Collector, Minor Collector and Local. An Arterial's function is to provide traffic mobility at higher speeds with limited property access. Traffic from the local roads is gathered by the Collector system, which provides a balance between mobility and property access trips. Local streets and roads serve property access based trips and these trips are generally shorter in length.

**The Delta City area is accessed by SR-9 as well as by SR-59. The functionally classified system is currently being revised statewide.** The current functionally classified system generally defines the higher traffic roads, so only minor additions or changes will be required.

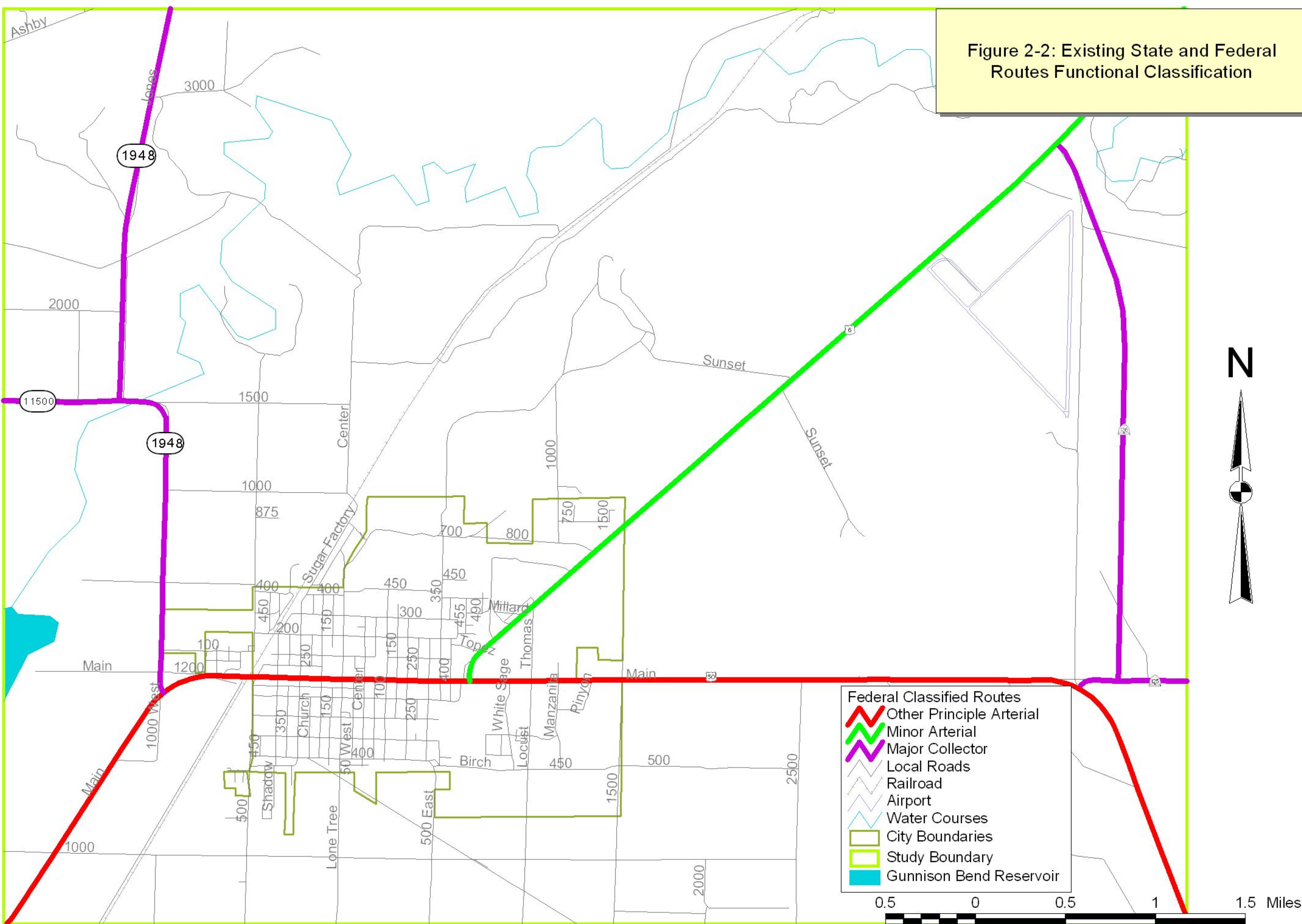
## 2.5 Bridges

There are **eleven** bridges on the state system located in the study area that could be eligible for federal bridge maintenance, rehabilitation, or replacement funds. Bridges are maintained and minor repairs made with maintenance funds. A bridge is rehabilitated or replaced as it deteriorates over time and as traffic volumes increase. (Figure 2-3 Bridge Sufficiency Rating)

Table 1 compares the bridges in the study area and identifies their sufficiency rating and location. Sufficiency rating indicates current condition of the structure with a rating of 100 showing a structure that is in excellent shape. A rating nearing 50 will reveal a structure that is in need of attention and is eligible for federal funding.



Figure 2-2: Existing State and Federal Routes Functional Classification





**Table 1. Bridges**

| Number | Location  | Maximum Span | No. Lanes & Road Width | Sidewalk   | Sufficiency Rating |
|--------|---|--------------|------------------------|------------|--------------------|
| F-297  | On SR-6, West Side of Delta over UPRR                         | 63.1m        | 2 Lanes, 15.6 m        | <b>Yes</b> | 92.2               |
| C-237  | On SR-6, 3.3 Miles West of Delta over Deseret Canal           | 13.1 m       | 2 Lanes, 11.6 m        | <b>No</b>  | 63.6               |
| C-241  | On SR-6, 3 Miles West of Delta over Seiver River              | 25.6 m       | 2 Lanes, 9.8 m         | <b>No</b>  | 80.0               |
| F-341  | On SR-6, 5.3 Miles NE of Delta ove Seiver River               | 43.3 m       | 2 Lanes, 12.9 m        | <b>No</b>  | 90.0               |
| E-1934 | On SR-6, 5.2 Miles NE of Delta over Melville Irrigation Canel | 15.8 m       | 2 Lanes, 11.0 m        | <b>No</b>  | 91.1               |
| F-521  | On SR-257 in Town of Deseret over Seiver River                | 36.9 m       | 2 Lanes, 15.6 m        | <b>Yes</b> | 80.5               |

Bridge Sufficiency Rating – Figure 2-3

Source: Utah Department of Transportation/Structures Division

## 2.6 Traffic Counts

Recent average daily traffic count data were obtained from UDOT. Table 2 shows the traffic count data on the key roadways of the study area. The number of vehicles in both directions that pass over a given segment of roadway in a 24-hour period is referred to as the average annual daily traffic (AADT) for that segment.

**Table 2. Average Annual Daily Traffic**

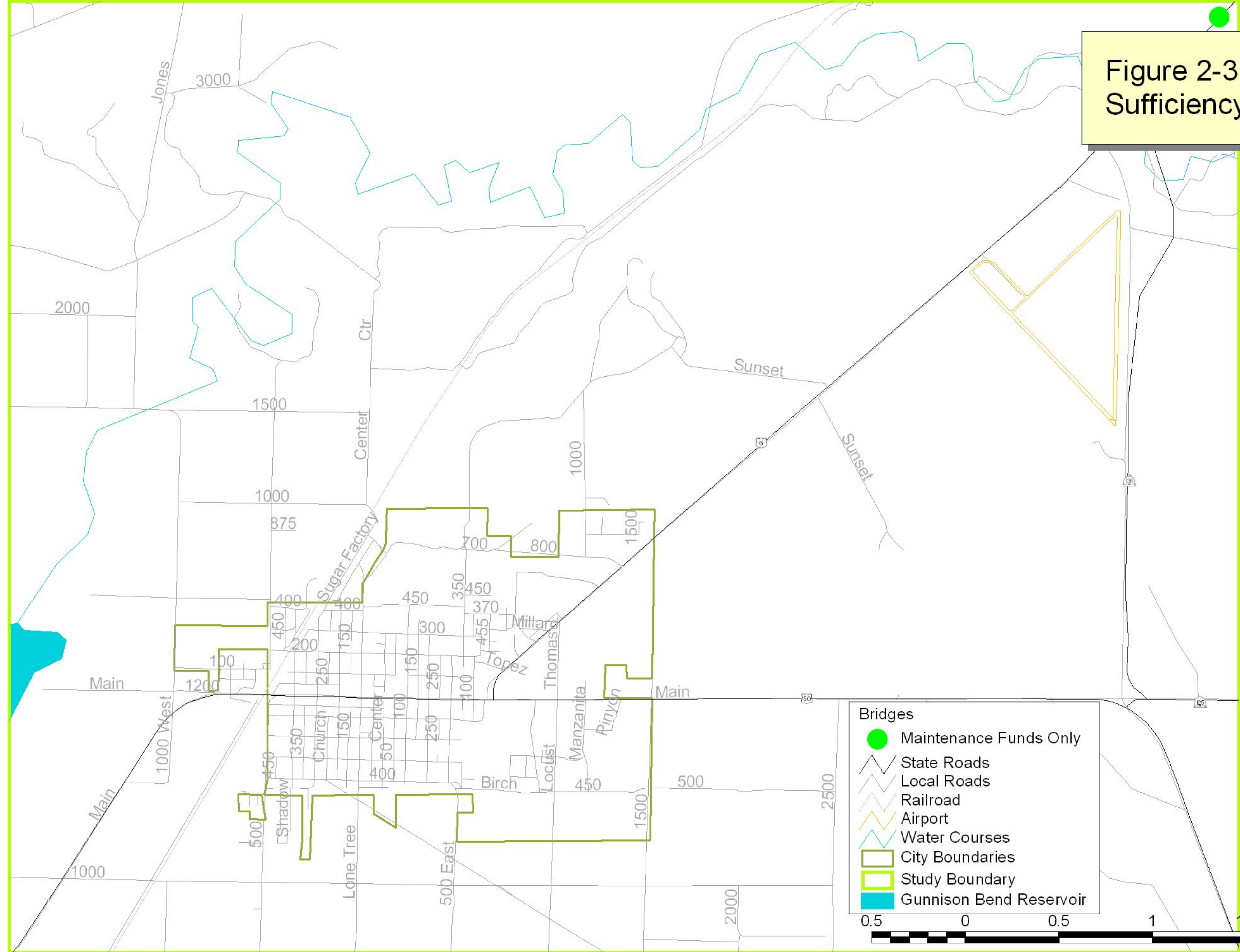
| Road  | Segment                        | Year | AADT  |
|-------|--------------------------------|------|-------|
| US-6  | Junction SR-257                | 2002 | 4,635 |
| US-6  | West Incorporated Limits Delta | 2002 | 7,311 |
| US-6  | Junction SR-50                 | 2002 | 7,165 |
| US-6  | East Incorporated Limits Delta | 2002 | 5,015 |
| US-50 | East Incorporated Limits Delta | 2002 | 2,280 |
| US-50 | Junction SR-125 East of Delta  | 2002 | 1,250 |

Source: Utah Department of Transportation

These are averages for the entire year. Delta City experiences a significant increase in traffic during the summer months. UDOT maintains 86 continuously operated automatic traffic recorders (ATR) throughout the state highway system. ATRs collect data continuously throughout the year in order to determine monthly, weekly, daily, and hourly traffic patterns. No ATR is located in or near the study area. No ATR is located in or near the study area.



### Figure 2-3: Bridge Sufficiency Rating





## 2.7 Traffic Accidents

Traffic accident data was obtained from UDOT's database of reported accidents from 2002. Table 3 summarizes the accident statistics for those segments for the year 2002. Additional information includes the average daily traffic, the number of reported accidents, and the accident rates. The roadway segment accident rates were determined in terms of accidents per million vehicle miles traveled. The crash rates for each roadway segment are compared to the expected crash rate for similar facilities across the state.

Table 3. Crash Data 2002

| Road | From Milepost | End Milepost | ADT (2002) | # Crashes (2002) | Crash Rate |           |
|------|---------------|--------------|------------|------------------|------------|-----------|
|      |               |              |            |                  | Actual     | Expected* |
| 6    | 84.3          | 87.63        | 1330       | 3                | 0.55       | 1.54      |
| 6    | 87.64         | 89.35        | 1875       | 11               | 2.98       | 1.54      |
| 6    | 89.36         | 93.8         | 2000       | 3                | 0.33       | 2.19      |
| 6    | 93.81         | 95.6         | 1800       | 0                | 0.00       | 2.19      |
| 50   | 0             | 3.59         | 2250       | 2                | 0.70       | 1.54      |
| 50   | 3.6           | 6            | 1235       | 0                | 0.00       | 1.54      |
| 125  | 0             | 1.25         | 465        | 2                | 3.41       | 2.37      |
| 136  | 0             | 3.06         | 215        | 0                | 0.00       | 2.37      |

\* Statewide average accident rates for functional class and volume group.

**Red indicates higher than expected rates of accidents**

Upon review of the accident data for the state system, there appears to be a higher than expected accident rates at the following locations:

- **On SR-9 From I-15 to approx. 1 mile east of the existing freeway interchange**
- **On SR-9 (State Street downtown Delta) MP 9.77 to 11.13**

The remainder of the state system shows a lower than expected accident rate. Figure 13 shows accident data taken from 1999-2001, which shows various segments of the state highway system and associated accident data.

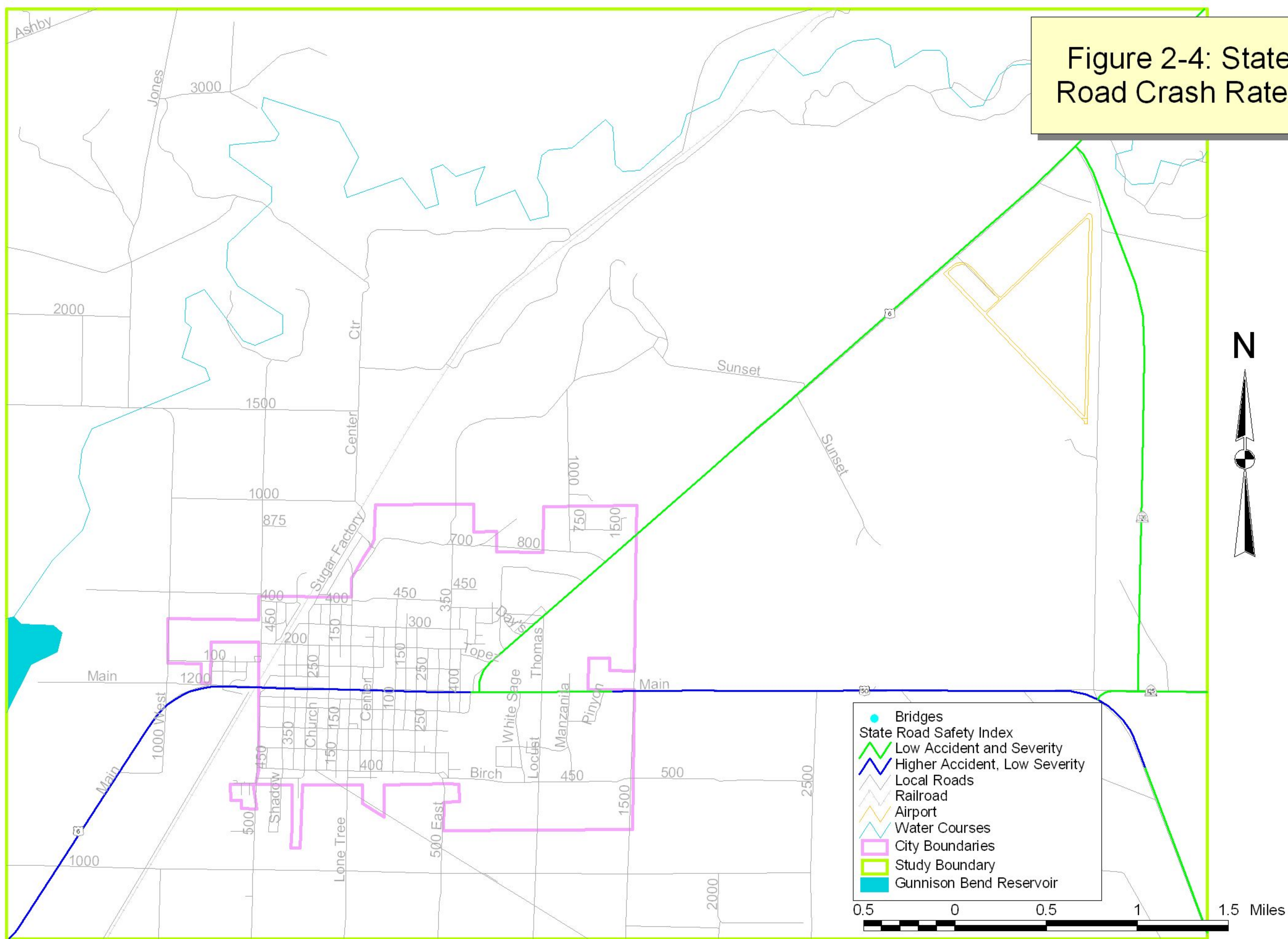
Delta City may wish to review the accident history for the local street system to identify any specific accident hot spot locations.

## 2.8 Bicycle and Pedestrian

The Federal Highway Administration recognizes the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system, and encourages state and local governments to incorporate all necessary provisions to accommodate bicycle and pedestrian traffic. In following this directive, Delta City is encouraged to adopt a "complete streets" philosophy that allows for the advancement of a transportation system for both motorized and non-motorized travel.



Figure 2-4: State Road Crash Rates





### **2.8.1 Biking/Trails**

There currently are not any dedicated bike lanes in Delta City. Although many of the roadways into and around the City provide sufficient shoulder-width to accommodate bicyclists, there are also locations where shoulder is in place, but is not paved. Therefore, those traveling along these roadways are forced to use the travel lane, whether biking or walking.

The City enjoys the economic benefit brought about by some of the bicycle touring groups that travel through Delta on their way to the Lehman Caves or Great Basin destinations. These groups frequently stay in the City overnight, bringing a boost to the overall economy.

While on-street cycling does occur in Delta City, the flat terrain that is prevalent in the area does not provide for a high level of mountain biking. The City also does not have any separate bicycle paths in the City and there are no plans to develop this type of facility in the near future.

Delta City is rural in nature and as such ATV use is a popular activity in the community. There is concern for the safety of those riders crossing the highway and riding these vehicles on the motorcycle track that is in place. Indications are that the out-of-bound riding has created problems for the City and there is consideration being given to designating routes specifically for ATV use.

### **2.8.2 Pedestrian**

Most of the City has sidewalk in good condition that provides for consistent pedestrian travel. There are segments in the system where additional sidewalk is required, such as along Center Street. At this location by the school, the City has installed sidewalk on one side of the street and would like to install sidewalk on the other side. The City is concerned about pedestrian safety and requires developers to install sidewalk in all new developments.

## **2.9 Public Transportation**

There is currently no local or intercity public transportation serving Delta other than a van operated by the M. E. Bird Senior Center located in town. The last intercity public transportation to serve Delta directly was Amtrak's Salt Lake City to Los Angeles "Desert Wind" passenger train. The "Desert Wind" was inaugurated in October of 1979 and it was discontinued on May 11, 1997. However, Delta was a stop for the "Desert Wind" only from October of 1983 until October of 1988. Today the nearest rail passenger service is Amtrak's Chicago to San Francisco Bay Area "California Zephyr" which stops in Provo and Salt Lake City.

Greyhound provides intercity bus service at Filmore, Utah on a route linking Salt Lake City with Phoenix as well as a route between Los Angeles and New York City via Denver and Chicago.

Intercity airline service is provided at the Salt Lake City International Airport, which is about 150 miles to the north of Delta.

## **2.10 Freight**

Although not located on a major highway freight route, Delta sees considerable local and regional truck freight, as well as some long-distance truck traffic. Delta is at the crossroads of U.S. Highways 6 and 50, as well as State Highways 125 and 257, all of which serve local industries and agribusiness. Primary commodities handled by truck to and through Delta are agricultural products such as grain, feed, dairy products and hay, as well as aggregate, lime, coal, building materials, and express parcels.

Delta is also served by the Union Pacific Railroad on a mainline linking Chicago with southern California via Salt Lake City. From 30 to 35 freight trains pass through Delta every 24 hours though few stop to serve local industries. Local rail freight service is provided by a local freight train operating out of the UP division point and yard in Milford, about 70 miles to the southwest. This UP local switches Delta industries on its round-trip from Milford to Lynndyl. Rail shipments into Delta consist primarily of grain and cattle feedstock, while outbound shipments consist of hay and other agricultural products.

As a regional transshipment point, Delta's rail freight service generates a number of truck shipments each day, most of which originate at the rail-served industries along the UP mainline at the north end of town.

The nearest airfreight service to Delta is provided at the Salt Lake City International Airport.

## **2.11 Aviation Facilities & Operations**

Located at an elevation of 4,755 feet, Delta Municipal Airport is located just off U.S. Highway 6 three miles northeast of town. Originally built as an auxiliary military airfield for the Dugway Proving Grounds and Bombing Range during World War II, Delta Municipal today serves both local general aviation as well as corporate aircraft.

Delta Municipal Airport is equipped with two runways; the primary runway is north/south #16/34, which is 5500 feet long, 75 feet wide, asphalt paved and equipped with pilot-activated lighting. Runway #16/34 is equipped with a GPS-based, non-precision instrument approach system, and the runway 16 end was recently equipped with Precision Approach Path Indicator (PAPI) approach lighting, as well as Runway & Identifier Lights (REILS).

Delta's secondary runway is east/west #12/30, which is 4600 feet long, 75 feet wide, asphalt paved, and equipped only with runway reflectors. Runway #12/30 is strictly Visual Flight Rules (VFR) rated for daytime use only.

Delta Municipal has paved parking and tie-downs for 10 aircraft and hanger space for another 15 planes. Minor aircraft repairs are available as is 100 low lead aviation gasoline. Delta is also equipped with a dawn to dusk aviation beacon light. Automated weather information service (AWOS) is available to pilots at Delta.

There is no airfreight or scheduled airline service at Delta; the nearest such services are at the Salt Lake City International Airport.

Future plans for Delta Municipal call for a runway crack seal project that should begin in 2005, along with improving the runway safety area by clearing brush and obstacles from along the runway right-of-way.

## 2.12 Revenue

Maintenance of existing transportation facilities and construction of new facilities come primarily from revenue sources that include the Delta City general fund, federal funds and State Class C funds.

Financing for local transportation projects consists of a combination of federal, state, and local revenues. However, this total is not entirely available for transportation improvement projects, since annual operating and maintenance costs must be deducted from the total revenue. In addition, the City is limited in their ability to subsidize the transportation budget from general fund revenues.

### 2.12.1 State Class B and C Program

The distribution of Class B and C Program monies is established by state legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Twenty-five percent of the funds derived from the taxes and fees are distributed to cities and counties for construction and maintenance programs.

Class B and C funds are allocated to each city and county by the following formula: 50% based on the population ratio of the local jurisdiction with the population of the State, 50% based on the ratio that the Class B roads weighted mileage within each county and the class C roads weighted mileage within each municipality bear to the total class B and Class C roads weighted mileage within the state. Weighted means the sum of the following: (i) paved roads multiplied by five; (ii) graveled road miles multiplied by two; and (iii) all other road types multiplied by one. (Utah Code 72-2-108) For more information go to UDOT's homepage @ [www.udot.utah.gov](http://www.udot.utah.gov), tab on "Doing Business" select the tab for "Local Government Assistance" here you will find the Regulations governing Class B&C funds

The table below identifies the ratio used to determine the amount of B and C funds allocated.

Apportionment Method of Class B and C Funds

| Based on | Of  |
|----------|---|
| 50%      | Roadway Mileage<br>*Based on Surface<br>Type Classification<br>(Weighted Measure)<br>Pave Road (X 5)<br>Graveled Road (X 2)<br>Other Road (X 1) |
| 50%      | Total Population  |

Class B and C funds can be used for maintenance and construction of highways, however thirty percent of the funds must be used for construction or maintenance projects that exceed \$40,000. Class B and C funds can also be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

Delta City received \$166,991.12 in 2003 for its Class C fund allocation.

### **2.12.2 Federal Funds**

There are federal monies that are available to cities and counties through federal-aid program. The funds are administered by the Utah Department of Transportation. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) provides funding for any road that is functionally classified as a collector street or higher. STP funds can be used for a range of projects including rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the State for urban areas. A portion of the STP funds can be used in any area of the State, at the discretion of the State Transportation Commission.

Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Advisory Committee reviews the applications and then a portion of those are recommended to the State Transportation Commission for funding. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities to water runoff mitigation. Other funds that are available are State Trails Funds, administered by the Division of Wildlife Resources.

The amount of money available for projects specifically in the study area varies each year depending on the planned projects in UDOT's Region Four. As a result, federal aid program monies are not listed as part of the study area's transportation revenue.

### **2.12.3 Local Funds**

Delta City, like most cities, has utilized general fund revenues in its transportation program. Other options available to improve the City's transportation facilities could involve some type of bonding arrangement, either through the creation of a redevelopment district or a special improvement district. These districts are organized for the purpose of funding a single, specific project that benefits and identifiable group of properties. Another source is through general obligation bonding arrangements for projects felt to be beneficial to the entire entity issuing the bonds.

#### **2.12.4 Private Sources**

Private interests often provide alternative funding for transportation improvements. Developers construct the local streets within the subdivisions and often dedicate right-of-way and participate in the construction of collector or arterial streets adjacent to their developments. Developers can be considered as an alternative source of funds for projects because of the impacts of the development, such as the need for traffic signals or street widening. Developers should be expected to mitigate certain impacts resulting from their developments. The need for improvements, such as traffic signals or street widening can be mitigated through direct construction or impact fees.

### **3. Future Conditions**

#### **3.1. Land Use and Growth**

Delta City's Transportation Master Plan must be responsive to current and future needs of the area. The area's growth must be estimated and incorporated into the evaluation and analysis of future transportation needs. This is done by:

- Forecasting future population, employment, and land use;
- Projecting traffic demand;
- Forecasting roadway travel volumes;
- Evaluating transportation system impacts;
- Documenting transportation system needs; and
- Identifying improvements to meet those needs.

This chapter summarizes the population, employment, and land use projections developed for the project study area. Future traffic volumes for the major roadway segments are based on projections utilizing 20 years of traffic count history. The forecasted traffic data are then used to identify future deficiencies in the transportation system.

##### **3.1.1 Population and Employment Forecasts**

The Governor's Office of Planning and Budget develop population and employment projections. The current population and employment levels, as well as the future projections for each are shown for Delta City and Millard County in the following table.

Population and Employment

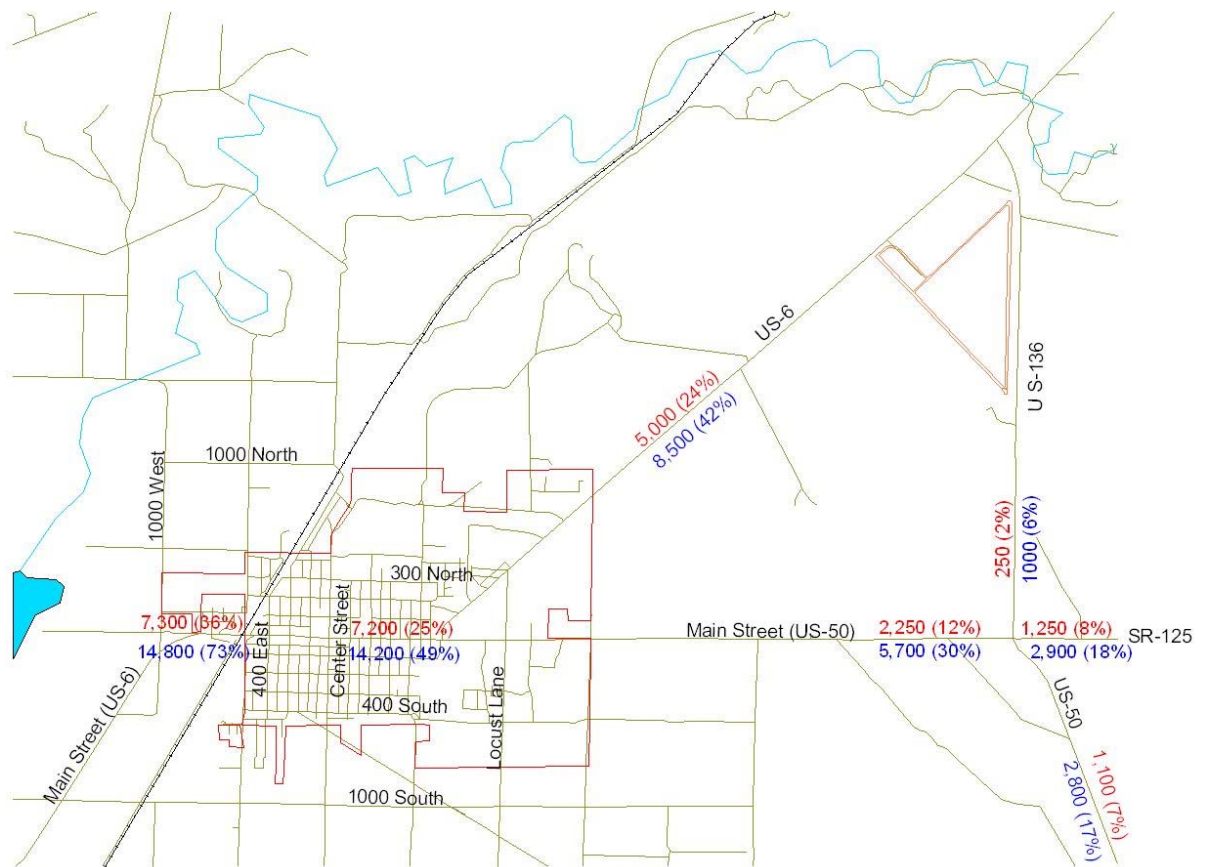
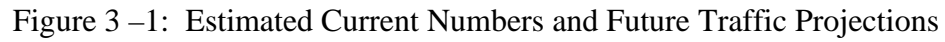
| Year | City       | County     |            |
|------|------------|------------|------------|
|      | Population | Population | Employment |
| 2000 | 3,209      | 12,405     | 6,040      |
| 2030 | 3,709      | 14,605     | 7,590      |

##### **3.1.2 Future Land Use**

The City has an annexation plan that describes where it plans to grow. Some areas for developments were discussed during the course of the Transportation Master Plan. Updated Land Use documents can be found in the Delta City General Plan.

While specific development plans change with time, it is important to note possible areas of development within the Delta City area. Commercial and industrial growth is also important in understanding transportation needs.

Traffic in the Delta area is growing at a fairly slow rate compared with State averages. Looking at the system as a whole there don't appear to be any capacity problems in the near future. However, some of the congestion at specific intersections could present problems needing attention.



## **4. Transportation Improvement Projects**

### **4.1 Current Statewide Transportation Improvement Program (2005-2009 STIP)**

At the present time there is a project under consideration and investigation in the Delta City area. Currently in the STIP are the following Projects:

- Two Bridge Replacements, # C-237 & # C-241, on US-6; 3 miles West of Delta.

Also, these projects are currently listed on the State of Utah's Long Range Plan, Utah Transportation 2030:

- Reconstruct/Safety/Bridge Project on US-6 from State Line to Juab/Millard County Line.
- Reconstruct US-50 from US-6 in Delta to near SR-100.
- Reconstruct SR-125 from US-50 near Delta to near 300 North (Oak City Limits).

### **4.2 Recommended Projects**

The following list identifies the seven projects that have been identified as having the highest priority to the Delta City Transportation Advisory Committee. These needs were identified through a series of meetings where the TAC identified the needs and set priorities for projects.

- Replace sidewalk, curb, and gutter along Main Street.
- Install decorative street lighting along Main Street.
- Develop city master drainage plan.
- Install new curb and gutter citywide. (various locations)
- Install citywide streetlights. (various locations)
- Review and improve plan for safe routes to school.
- Install more crosswalks along Main Street.

Additionally, many concerns and issues were identified which are found on the following page.



Delta City Transportation Issues List and Cost Estimates

| Route or Street Name | General Location Description | Description of Issue   | Potential UDOT LRP Issue? | Issue Category | Potential Project or Action | Planning Meeting Reference | Date   | Planning Level Cost Estimate |
|----------------------|------------------------------|--|---------------------------|----------------|-----------------------------|----------------------------|--------|------------------------------|
| Local                | Citywide                     | Develop city master drainage plan                                  |                           | Roadway        | Drainage                    | TMP                        | Feb-05 | \$100,000                    |
| Local                | Citywide                     | Develop ATV trail plan (include Piute Trail & Little Sahara Dunes) |                           | ATV            | Study                       | TMP                        | Feb-05 | \$50,000                     |
| Local                | Citywide                     | Develop city sidewalk priorities & safe routes to school plan      |                           | Bike/ped       | Study                       | TMP                        | Feb-05 | \$50,000                     |
| 450 North            | 600 E.                       | Additional canal crossing  |                           | Roadway        | Bridge Project              | TMP                        | Feb-05 | \$150,000                    |
| 450 South            | 600 E.                       | Widen existing canal crossing                                      |                           | Roadway        | Bridge Project              | TMP                        | Feb-05 | \$70,000                     |
| 450 North            | 600 E. to US-6               | New Road Construction  |                           | Roadway        | New Road Construction       | TMP                        | Feb-05 | \$400,000                    |
| US-6                 | 400 E. to 400 W.             | Curb and gutter doesn't drain                                      |                           | Roadway        | Curb & Gutter Project       | TMP                        | Feb-05 | \$130,000                    |
| US-6                 | Delta to I-15                | Increase number of pull-outs (used 4 for qty.)                     |                           | Roadway        | Traffic Pull Out Project    | TMP                        | Feb-05 | \$250,000                    |
| US-6/50              | Main Street                  | Decorative street lighting (600 E. to 500 W.)                      |                           | Enhancement    | Lighting Project            | TMP                        | Feb-05 | \$200,000                    |
| US-6/50              | 300 W.                       | Crosswalk  |                           | Safety         | Crosswalk                   | TMP                        | Feb-05 | \$3,000                      |
| US-6/50              | 300 E.                       | Crosswalk  |                           | Safety         | Crosswalk                   | TMP                        | Feb-05 | \$3,000                      |
| US-6/50              | 200 E.                       | Crosswalk  |                           | Safety         | Crosswalk                   | TMP                        | Feb-05 | \$3,000                      |
| US-6/50              | 400 W.                       | Crosswalk  |                           | Safety         | Crosswalk                   | TMP                        | Feb-05 | \$3,000                      |
| US-6/50              | 100 W.                       | Crosswalk  |                           | Safety         | Crosswalk                   |                            |        | \$3,000                      |
| US-6/50              | 450 E.                       | Crosswalk  |                           | Safety         | Crosswalk                   |                            |        | \$3,000                      |
| US-6/50              | RR Bridge (500 W.)           | Restripe for bike lane over RR structure                           |                           | Bike/ped       | Trail Project               | TMP                        | Feb-05 | \$20,000                     |
| US-6/50              | Main Street                  | Replace sidewalks 6-8 ft.  |                           | Bike/ped       | Sidewalk Project            | TMP                        | Feb-05 | \$300,000                    |
| US-6/50              | 2000 W.                      | Add turn lane and adjust alignment                                 |                           | Intersection   | Improve Intersection        | TMP                        | Feb-05 | \$400,000                    |
| US-6/50              | 1000 W.                      | Adjust intersection alignment                                      |                           | Intersection   | Turn Lane Project           | TMP                        | Feb-05 | \$250,000                    |
| US-6                 | Center St                    | New traffic signal   |                           | Intersection   | Signal Project              | TMP                        | Feb-05 | \$120,000                    |
| US-6                 | 300 E.                       | New traffic signal   |                           | Intersection   | Signal Project              | TMP                        | Feb-05 | \$120,000                    |
|                      |                              |  |                           |                | TOTAL                       |                            |        | \$2,628,000                  |
| Local                | Citywide                     | New curb and gutter various locations (cost per block)             |                           | Roadway        | Curb & Gutter Project       | TMP                        | Feb-05 | \$20,000                     |
| Local                | Citywide                     | Street lights (cost per block)                                     |                           | Safety         | Lighting Project            | TMP                        | Feb-05 | \$5,000                      |
| Local                | Citywide                     | Sidewalks (cost per block) 4 ft.                                   |                           | Bike/ped       | Sidewalk Project            | TMP                        | Feb-05 | \$20,000                     |
| Local                | Citywide                     | Widen city street pavement to 44 ft (cost per block)               |                           | Roadway        | Road Widening               | TMP                        | Feb-05 | \$40,000                     |
| OTHER ISSUES         |                              |  |                           |                |                             |                            |        |                              |
| 2000 North           | Jones Road                   | Enforcement of stop sign   |                           | Safety         |                             | TMP                        | Feb-05 |                              |
| US-6/50              | 1000 West                    | Enforcement of stop sign   |                           | Safety         |                             | TMP                        | Feb-05 |                              |
| Local                | Regionwide                   | Need intercity transit system                                      |                           | Transit        | New Transit Service         | TMP                        | Feb-05 |                              |
| SR-125               | E. of SR-50 & SR-136         | Safety concerns over open range                                    |                           |                |                             |                            |        |                              |
| US-6                 | Nephi to Jericho Jct         | Install guard rails  |                           | Safety         | Guardrail Project           | TMP                        | Feb-05 |                              |
| US-6                 | Hinckley                     | Speed study to lower speed limit to 40 mph west of town            |                           | Traffic        | Speed Study                 | TMP                        | Feb-05 |                              |

Note 1 - US-6 scheduled for 1.5" rotomill/overlay in UDOT maintenance program for 2007

## **4.3 Revenue Summary**

### **4.3.1 Federal and State Participation**

Federal and State participation is important for the success of implementing these projects. UDOT needs to see the Transportation Master Plan so that they understand what the City wants to do with its transportation system. UDOT can then weigh the priorities of the city against the rest of the state. It is important for Delta City to promote projects that can be placed on UDOT's five-year Statewide Transportation Improvement Program (STIP) as soon as possible. The process for placing projects into the STIP and funding of these projects can be found at UDOT's homepage @ [www.udot.utah.gov](http://www.udot.utah.gov), tab on "Doing Business" select the tab for "Planning and Programming" here there is a subtopic entitled "Statewide Transportation Improvement Program (STIP)" that describes this program in detail. Additionally coordination with UDOT's Region Director and Planning Engineer will be practical.

### **4.3.2 City Participation**

The City will fund the local Delta City projects. The local match component and partnering opportunities vary by the funding source.

## **4.4 Other Potential Funding**

Previous sections of this chapter show significant shortfalls projected for the short-range and long-range programs. The following options may be available to help offset all or part of the anticipated shortfalls:

- Increased transportation impact fees.
- Increased general fund allocation to transportation projects.
- General obligation bonds repaid with property tax levies.
- Increased participation by developers, including cooperative programs and incentives.
- Special improvement districts (SIDs), whereby adjacent property owners are assessed portions of the project cost.
- Sales or other tax increase.
- State funding for improvements on the county roadway system.
- Increased gas tax, which would have to be approved by the State Legislature.
- Federal-aid available under one of the programs provided in the federal transportation bill (TEA-21 is the current bill; SAFETEA will likely be passed in late 2005).

Increased general fund allocation means that General Funds must be diverted from other governmental services and/or programs. General obligation bonds provide initial capital for transportation improvement projects but add to the debt service of the governmental agency. One way to avoid increased taxes needed to retire the debt is to sell bonds repaid with a portion of the municipalities' State Class monies for a certain number of years.

Participation by private developers provides a promising funding mechanism for new projects. Developers can contribute to transportation projects by constructing on-site improvements along their site frontage and by paying development fees. Municipalities

commonly require developers to dedicate right-of-way and widen streets along the site frontage. A negative side of the on-site improvements is that the streets are improved in pieces. If there are not several developers adjacent to one another at the same time, a continuous improved road is not provided. One way to overcome this problem is for the jurisdiction to construct the street and charge the developers their share when they develop their property.

Another way developers can participate is through development fees. The fees would be based on the additional improvements required to accommodate the new development and would be proportioned among each development. The expenditure of additional funds provided by the fees would be subject to the City's spending limit. However, development fees are often a controversial issue and may or may not be an appropriate method of funding projects.

## **5. Planning Issues and Guidelines**

Provided below is a discussion of various issues with a focus on elements that promote a safe and efficient transportation system in the future.

### **5.1 Guidelines and Policies**

These guidelines address certain areas of concern that are applicable to Delta City's Transportation Master Plan.

#### **5.1.1 Access Management**

This section will define and describe some of the aspects of Access Management for roadways and why it is so important. Access Management can make many of the roads in a system work better and operate more safely if properly implemented. There are many benefits to properly implemented access management. Some of the benefits follow:

- Reduction in traffic conflicts and accidents
- Reduced traffic congestion
- Preservation of traffic capacity and level of service
- Improved economic benefits businesses and service agencies
- Potential reductions in air pollution from vehicle exhausts

##### **5.1.1.1 Definition**

Access management is the process of comprehensive application of traffic engineering techniques in a manner that seeks to optimize highway system performance in terms of safety, capacity, and speed. Access Management is one tool of many that makes a traffic system work better with what is available.

##### **5.1.1.2 Access Management Techniques**

There are many techniques that can be used in access management. The most common techniques are signal spacing, street spacing, access spacing, and interchange to crossroad access spacing. There are various distances for each spacing, dependant upon the roadway type being accessed and the accessing roadway. UDOT has developed an access management program and more information can be gathered from the UDOT website and from the Access Management Program Coordinator.

##### **5.1.1.3 Where to Use Access Management**

Access Management can be used on any roadway. In some cases, such as State Highways, access management is a requirement. Access management can be used as an inexpensive way to improve performance on a major roadway that is increasing in

volume. Access management should be used on new roadways and roadways that are to be improved so as to prolong the usefulness of the roadway.

### **5.1.2 Context Sensitive Solutions**

Context Sensitive Solutions (CSS) addresses the need, purpose, safety and service of a transportation project, as well as the protection of scenic, aesthetic, historic, environmental and other community values. CSS is an approach to transportation solutions that find, recognize and incorporate issues/factors that are part of the larger context such as the physical, social, economic, political and cultural impacts. When this approach is used in a project the project become better for all of the entities involved.

### **5.1.3 Recommended Roadway Cross Sections**

Cross sections are the combination of the individual design elements that constitute the design of the roadway. Cross section elements include the pavement surface for driving and parking lanes, curb and gutter, sidewalks and additional buffer/landscape areas. Right-of-way is the total land area needed to provide for the cross section elements. Suggested types of cross-sections can be found in figure 4-1.

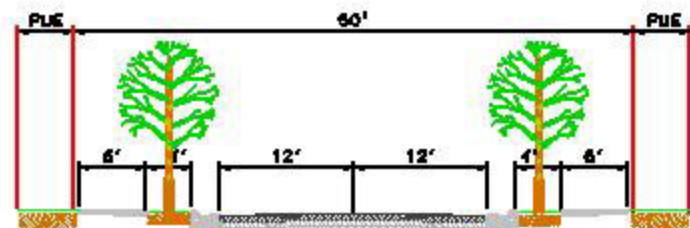
The design of the individual roadway elements depends on the intended use of the facility. Roads with higher design volumes and speeds need more travel lanes and wider right-of-way than low volume, low speed roads. The high use roadway type should include wider shoulders and medians, separate turn lanes, dedicated bicycle lanes, elimination of on street parking, and control of driveway access. For most roadways, an additional buffer area is provided beyond the curb line. This buffer area accommodates the sidewalk area, landscaping, and local utilities. Locating the utilities outside the traveled way minimizes traffic disruption in utility repairs or changes in service are needed.

Federal Highway standard widths apply on the all roads that are part of the state highway system. Also, all federally funded roadways in Delta City and Millard County must adhere to the same standards for widths and design.

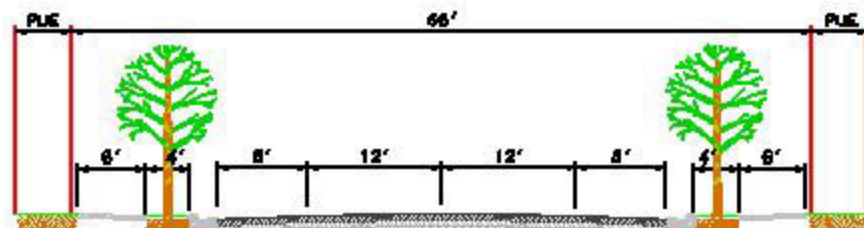
## **5.2 Bicycles and Pedestrians**

### **5.2.1 Bicycles/Trails**

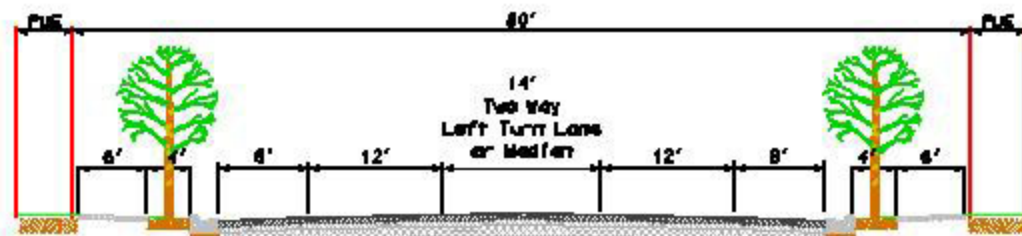
Bicycles are allowed on all roadways, except where legally prohibited, and as such should be a consideration on all roads that are being designed and constructed, and as roadway improvements are taking place. To increase the level of interest in bicycling in the Delta area, the City should consider requiring developers to include separate bicycle/pedestrian pathways in all new developments. Opportunities to include bike lanes and increased shoulder-width in conjunction with a roadway project should be taken whenever technically, environmentally, and financially feasible.



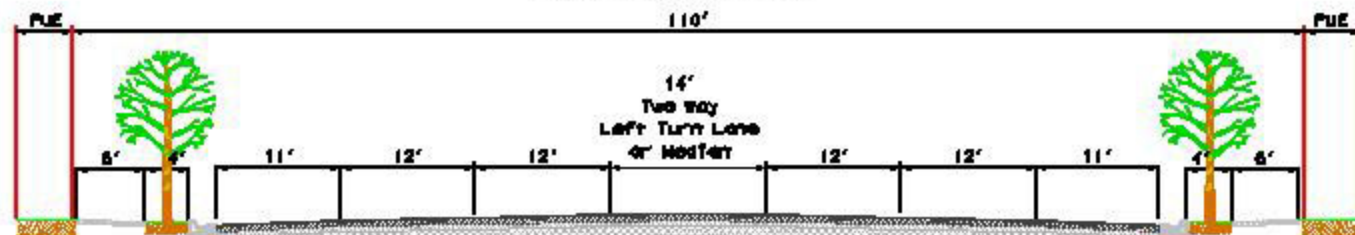
Two-Lane Cross Section  
24 feet MAXIMUM ASPHALT WIDTH



Two Lane Cross Section  
With Shoulders  
Spaced between Arterials



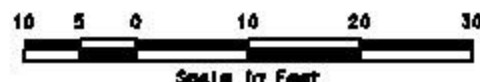
Three Lane Cross Section  
With Shoulder  
Spaced between Arterials



Five Lane Cross Section  
With Shoulders  
Minimum spacing approximately 1/4 mile

**Notes:**

1. Shoulder Dimension varies from 4' to 8' (See UDOT Std. Dev. 011 Note 3)
2. Public Utility Easement (PUE) dimension varies from 2.5' to 12' Typical
3. Shoulder Dimensions:  
on 60' ROW - varies from 8' to 12'  
on 110' ROW - varies from 10' to 12'  
See AASHTO & Policy on Geometric Design of Highways and Streets



**Suggested  
Typical Cross Section**

Revised: September 16, 2004

As referenced in Chapter 2 of this Plan, the popular use of ATV's has created some problems for the City. These problem areas should be studied and a determination made to curtail some of the out-of-bound riders, possibly by designating routes, imposing restrictions, and enforcement. Input from the community will be essential in establishing a satisfactory resolution.

As growth occurs in the area the City may want to pursue development of a trails plan, which would provide alternative and recreational modes of travel to enhance the quality of life for those in the community. It is important to note that regardless of the trails system's function, as the bike/trail facilities are planned, designed and constructed, the City should review the connectivity of the system. With input from the community, a review of the connectivity of the trails should play an integral role in the decision making process for potential projects. In order to enhance the quality of life for those in the community, the trails should be accessible to all users and incorporate ADA requirements.

The trails, when constructed, may have slight variances in application type due to possible differences in the terrain at a specific trail location or differing user needs. However, regardless of the design type, the applicable design standards found in the latest version of the AASHTO Guide for the Development of Bicycle Facilities should be followed, as well as the Manual on Uniform Traffic Control Devices (MUTCD) guidelines for appropriate signage of the trails system.

### **5.2.2 Pedestrians**

Every effort should be made to accommodate pedestrians throughout Delta City. An opportunity to include accessible sidewalks, while adhering to ADA requirements, during construction of other projects is encouraged. For the safety and convenience of pedestrian traffic, sidewalk placement should be free from debris and obstructions or impediments such as utility poles, trees, bushes, etc. The City should research and inventory their sidewalk system, and document locations, such as the Center Street location referenced in Chapter 2 of this Plan, where there may be gaps or safety concerns. Effort should then be made to construct and complete the sidewalks where gaps or problems occur. Delta City should continue to require developers to include sidewalk improvements in their projects plans, whether commercial or residential. To allow for pedestrian travel, the interconnectedness of the City's sidewalk system should be considered as all development takes place.

Sidewalks in residential areas should be at least 5-feet wide whenever adequate right-of-way can be secured. This will provide sufficient room and a level of comfort to persons walking in pairs or passing and will specifically allow for persons with strollers or in wheelchairs to pass. On major roadways, sidewalks at least 6-feet wide and with a 6 to 10-foot park strip are desirable. In pedestrian-focused areas, such as schools, parks, sports venues or theaters, and in hotel and market districts, even wider sidewalks are recommended to accommodate and encourage a higher level of pedestrian activity, especially where tourist use would be expected. To ensure consistency of sidewalks

throughout the area, UDOT's approved standard for sidewalks should be followed, as well as the 2004 AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities.

There may be opportunity for the City to make improvements to their sidewalk system through the Utah Department of Transportation's Safe Sidewalk Program, available through the Traffic and Safety Division. The City should contact UDOT's Region Four office for application requirements.

The City should be aware of, and coordinate with, the area schools that are tasked with developing a routing plan to provide a safe route to school. The routing plan is to be reviewed and updated annually. Information regarding the Safe Routes to School program is available by contacting the Utah Department of Transportation's Traffic and Safety Division.

### **5.3 Enhancements Program**

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) created the Transportation Enhancement program. The program has since been reauthorized in subsequent bills (i.e. TEA-21). The Transportation Enhancement program provides opportunities to use federal dollars to enhance the cultural and environmental value of the transportation system. These transportation enhancements are defined as follows by TEA-21:

The term 'transportation enhancement activities' means, with respect to any project or the area to be served by the project, any of the following activities if such activity relates to surface transportation: provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs (including the provision of tourist and welcome center facilities), landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals), preservation of abandoned railway corridors (including the conservation and use thereof for pedestrian or bicycle trails), control and removal of outdoor advertising, archeological planning and research, environmental mitigation to address water pollution due to highway runoff or reduce vehicle caused wildlife mortality while maintaining habitat connectivity, and establishment of transportation museums.

The Utah Transportation Commission, with the help of an advisory committee, decides which projects will be programmed and placed on the Statewide Transportation Improvement Program (STIP). Applications are accepted in an annual cycle for the limited funds available to UDOT for such projects. Information and Applications for the current cycle can be found on UDOT's homepage @ [www.udot.utah.gov](http://www.udot.utah.gov), tab on "Doing Business" select "Planning and Programming", here you will find a sub-topic entitled "Transportation Enhancement



Program”. Applications must be received by the UDOT Program Development Office, on or before the specified date to be considered. Projects will compete on a statewide basis.

## **5.4 Transportation Corridor Preservation**

Transportation Corridor Preservation will be introduced as a method of helping Delta’s Transportation Master Plan. This section will define what Corridor Preservation is and ways to use it to help the Transportation Master Plan succeed for the City.

### **5.4.1 Definition**

Transportation Corridor Preservation is the reserving of land for use in building roadways that will function now and can be expanded at a later date. It is a planning tool that will reduce future hardships on the public and the city. The land along the corridor is protected for building the roadway and maintaining the right-of-way for future expansion by a variety of methods, some of which will be discussed here.

### **5.4.2 Corridor Preservation Techniques**

There are three main ways that a transportation corridor can be preserved. The three ways are acquisition, police powers, and voluntary agreements and government inducements. Under each of these are many sub-categories. The main methods will be discussed here, with a listing of some of the sub-categories.

#### **5.4.2.1 Acquisition**

One way to preserve a transportation corridor is to acquire the property outright. The property acquired can be developed or undeveloped. When the city is able to acquire undeveloped property, the city has the ability to build without greatly impacting the public. On the other hand, acquiring developed land can be very expensive and can create a negative image for the City. Acquisition of land should be the last resort in any of the cases for Transportation Corridor Preservation. The following is a list of some ways that land can be acquired.

- Development Easements
- Public Land Exchanges
- Private Land Trusts
- Advance Purchase and Eminent Domain
- Hardship Acquisition
- Purchase Options

#### **5.4.2.2 Exercise of Police Powers**

Police powers are those ordinances that are enacted by a municipality in order to control some of the aspects of the community. There are ordinances that can be helpful in preserving corridors for the Transportation Master Plan. Many of the

ordinances that can be used for corridor preservation are for future developments in the community. These can be controversial, but can be initially less intrusive.

- Impact Fees and Exactions
- Setback Ordinances
- Official Maps or Maps of Reservation
- Adequate Public Facilities and Concurrency Requirements

#### **5.4.2.3 Voluntary Agreements and Governmental Inducements**

Voluntary agreements and governmental inducements rely on the good will of both the developers and the municipality. Many times it is a give and take situation where both parties could benefit in the end. The developer will likely have a better-developed area and the municipality will be able to preserve the corridor for transportation in and around the development. Listed below are some of the voluntary agreements and governmental inducements that can be used in order to preserve transportation corridors in the city limits.

- Voluntary Platting
- Transfer of Development Rights
- Tax Abatement
- Agricultural Zoning

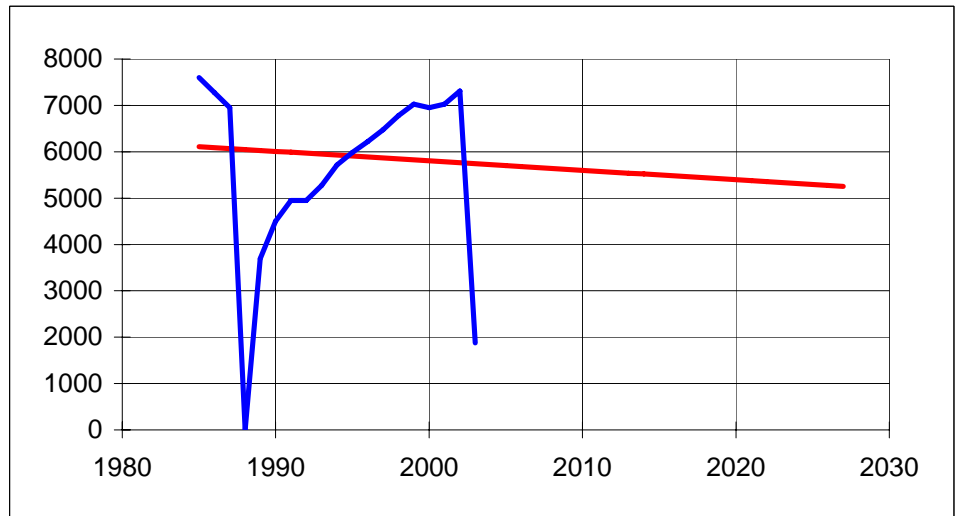
Each of these methods has its place, but there is an order that any government should try to use. Voluntary agreements and government inducements should be used, if possible, before any police powers are used. Police powers should be tried before acquisition is sought. UDOT has developed a toolkit to aid in corridor preservation techniques. This toolkit contains references to Utah code and examples of how the techniques have been used in the past.



Route US-6  
Limits 1000 West to Sutherland

| Year   | AADT  | Forecast |
|--------|-------|----------|
| 1985   | 7,600 | 6110     |
| 1986   | 7,275 | 6090     |
| 1987   | 6,950 | 6070     |
| 1988 * |       | 6049     |
| 1989   | 3,690 | 6029     |
| 1990   | 4,500 | 6008     |
| 1991   | 4,950 | 5988     |
| 1992   | 4,950 | 5968     |
| 1993   | 5,275 | 5947     |
| 1994   | 5,715 | 5927     |
| 1995   | 5,985 | 5906     |
| 1996   | 6,220 | 5886     |
| 1997   | 6,475 | 5866     |
| 1998   | 6,780 | 5845     |
| 1999   | 7,025 | 5825     |
| 2000   | 6,954 | 5804     |
| 2001   | 7,030 | 5784     |
| 2002   | 7,311 | 5764     |
| 2003   | 1,875 | 5743     |
| 2004   |       | 5723     |
| 2005   |       | 5702     |
| 2006   |       | 5682     |
| 2007   |       | 5662     |
| 2008   |       | 5641     |
| 2009   |       | 5621     |
| 2010   |       | 5600     |
| 2011   |       | 5580     |
| 2012   |       | 5560     |
| 2013   |       | 5539     |
| 2014   |       | 5519     |
| 2015   |       | 5498     |
| 2016   |       | 5478     |
| 2017   |       | 5458     |
| 2018   |       | 5437     |
| 2019   |       | 5417     |
| 2020   |       | 5396     |
| 2021   |       | 5376     |
| 2022   |       | 5356     |
| 2023   |       | 5335     |
| 2024   |       | 5315     |
| 2025   |       | 5294     |
| 2026   |       | 5274     |
| 2027   |       | 5254     |

Projection based on 1985 to 2003 data  
-0.4% growth rate → (20) vehicles/year



5% Trucks

#### Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.



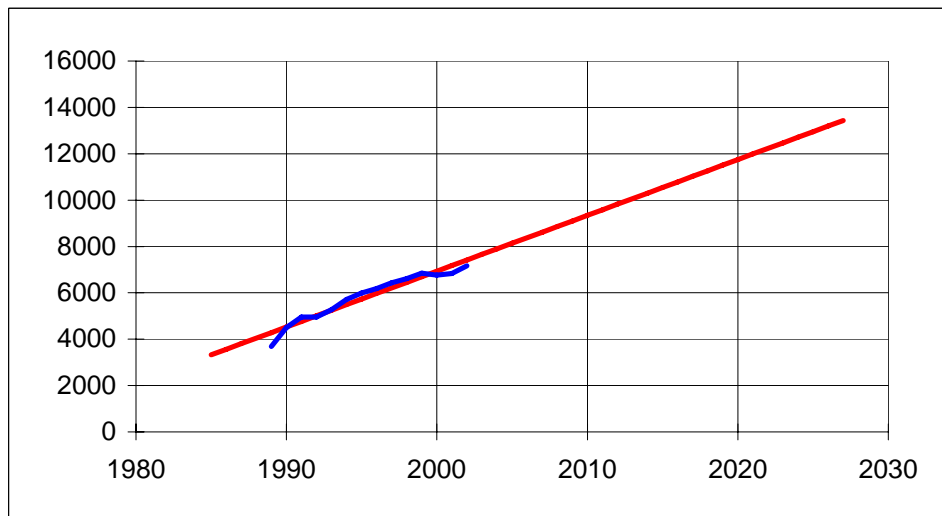
Route  
Limits

US-6

Downtown to junction with SR-50

| Year | AADT  | Forecast |
|------|-------|----------|
| 1985 |       | 3323     |
| 1986 |       | 3564     |
| 1987 |       | 3805     |
| 1988 |       | 4045     |
| 1989 | 3,690 | 4286     |
| 1990 | 4,500 | 4527     |
| 1991 | 4,950 | 4768     |
| 1992 | 4,950 | 5008     |
| 1993 | 5,275 | 5249     |
| 1994 | 5,715 | 5490     |
| 1995 | 5,985 | 5731     |
| 1996 | 6,190 | 5971     |
| 1997 | 6,435 | 6212     |
| 1998 | 6,610 | 6453     |
| 1999 | 6,845 | 6694     |
| 2000 | 6,770 | 6934     |
| 2001 | 6,835 | 7175     |
| 2002 | 7,165 | 7416     |
| 2003 |       | 7657     |
| 2004 |       | 7898     |
| 2005 |       | 8138     |
| 2006 |       | 8379     |
| 2007 |       | 8620     |
| 2008 |       | 8861     |
| 2009 |       | 9101     |
| 2010 |       | 9342     |
| 2011 |       | 9583     |
| 2012 |       | 9824     |
| 2013 |       | 10064    |
| 2014 |       | 10305    |
| 2015 |       | 10546    |
| 2016 |       | 10787    |
| 2017 |       | 11027    |
| 2018 |       | 11268    |
| 2019 |       | 11509    |
| 2020 |       | 11750    |
| 2021 |       | 11990    |
| 2022 |       | 12231    |
| 2023 |       | 12472    |
| 2024 |       | 12713    |
| 2025 |       | 12953    |
| 2026 |       | 13194    |
| 2027 |       | 13435    |

Projection based on 1985 to 2003 data  
3.4% growth rate → 241 vehicles/year



5% Trucks

#### Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.



Route

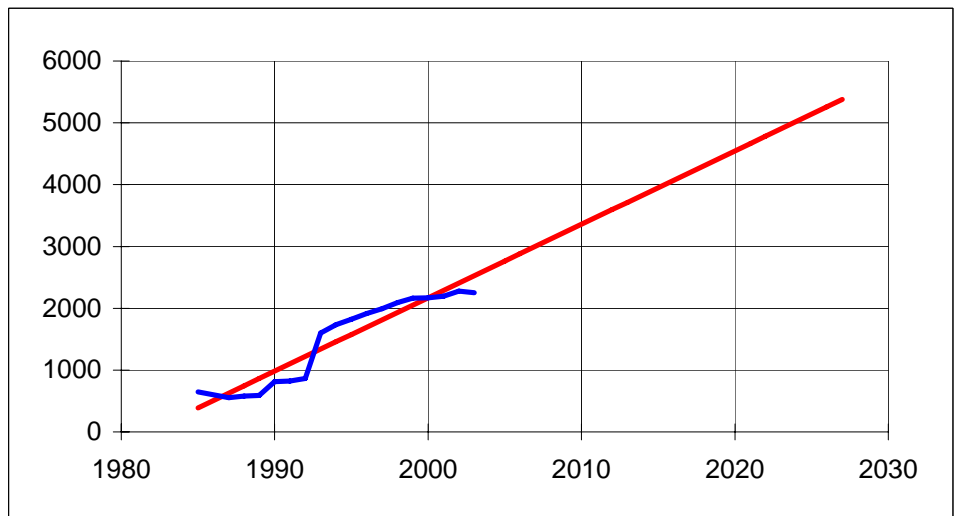
SR-50

Limits

US-6 to SR-125

| Year | AADT  | Forecast |
|------|-------|----------|
| 1985 | 645   | 388      |
| 1986 | 600   | 507      |
| 1987 | 555   | 626      |
| 1988 | 580   | 745      |
| 1989 | 590   | 863      |
| 1990 | 815   | 982      |
| 1991 | 825   | 1101     |
| 1992 | 865   | 1220     |
| 1993 | 1,600 | 1339     |
| 1994 | 1,735 | 1457     |
| 1995 | 1,820 | 1576     |
| 1996 | 1,915 | 1695     |
| 1997 | 1,995 | 1814     |
| 1998 | 2,090 | 1933     |
| 1999 | 2,165 | 2051     |
| 2000 | 2,170 | 2170     |
| 2001 | 2,195 | 2289     |
| 2002 | 2,280 | 2408     |
| 2003 | 2,250 | 2526     |
| 2004 |       | 2645     |
| 2005 |       | 2764     |
| 2006 |       | 2883     |
| 2007 |       | 3002     |
| 2008 |       | 3120     |
| 2009 |       | 3239     |
| 2010 |       | 3358     |
| 2011 |       | 3477     |
| 2012 |       | 3596     |
| 2013 |       | 3714     |
| 2014 |       | 3833     |
| 2015 |       | 3952     |
| 2016 |       | 4071     |
| 2017 |       | 4190     |
| 2018 |       | 4308     |
| 2019 |       | 4427     |
| 2020 |       | 4546     |
| 2021 |       | 4665     |
| 2022 |       | 4783     |
| 2023 |       | 4902     |
| 2024 |       | 5021     |
| 2025 |       | 5140     |
| 2026 |       | 5259     |
| 2027 |       | 5377     |

Projection based on 1985 to 2003 data  
5.2% growth rate → 119 vehicles/year



5% Trucks

#### Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.



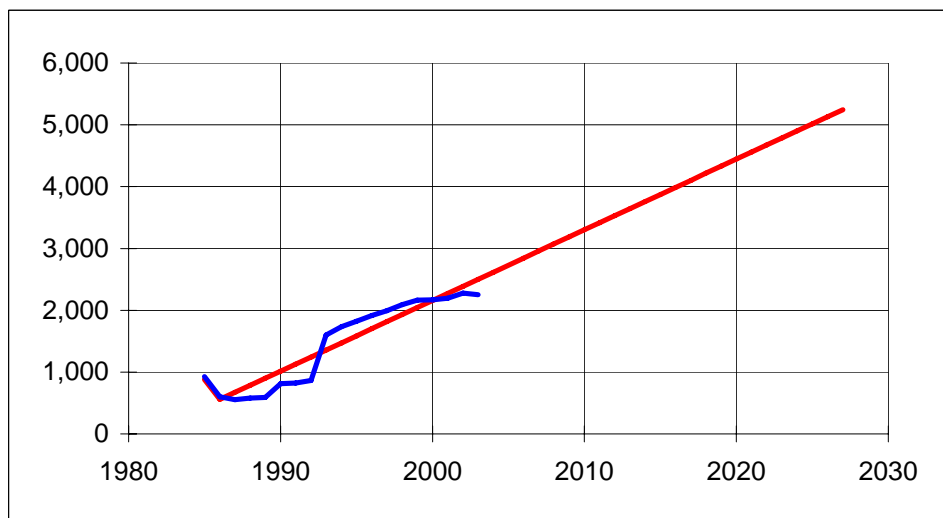
Route SR-50  
Limits SR-125 to South

| Year | AADT  | Forecast |
|------|-------|----------|
| 1985 | 925   | 880      |
| 1986 | 600   | 557      |
| 1987 | 555   | 672      |
| 1988 | 580   | 786      |
| 1989 | 590   | 900      |
| 1990 | 815   | 1015     |
| 1991 | 825   | 1129     |
| 1992 | 865   | 1243     |
| 1993 | 1,600 | 1358     |
| 1994 | 1,735 | 1472     |
| 1995 | 1,820 | 1586     |
| 1996 | 1,915 | 1701     |
| 1997 | 1,995 | 1815     |
| 1998 | 2,090 | 1930     |
| 1999 | 2,165 | 2044     |
| 2000 | 2,170 | 2158     |
| 2001 | 2,195 | 2273     |
| 2002 | 2,280 | 2387     |
| 2003 | 2,250 | 2501     |
| 2004 |       | 2616     |
| 2005 |       | 2730     |
| 2006 |       | 2845     |
| 2007 |       | 2959     |
| 2008 |       | 3073     |
| 2009 |       | 3188     |
| 2010 |       | 3302     |
| 2011 |       | 3416     |
| 2012 |       | 3531     |
| 2013 |       | 3645     |
| 2014 |       | 3759     |
| 2015 |       | 3874     |
| 2016 |       | 3988     |
| 2017 |       | 4103     |
| 2018 |       | 4217     |
| 2019 |       | 4331     |
| 2020 |       | 4446     |
| 2021 |       | 4560     |
| 2022 |       | 4674     |
| 2023 |       | 4789     |
| 2024 |       | 4903     |
| 2025 |       | 5018     |
| 2026 |       | 5132     |
| 2027 |       | 5246     |

835 870 885 985 805 975 1,010

Projection based on 1985 to 2003 data

5.0% growth rate → 114 vehicles/year



5% Trucks

#### Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.